LISTING OF THE CLAIMS

Claims 1-13, 15-19 and 21-23 were pending in the Application. Claim 1 is an independent claim and claims 2-13 and 15 depend there from. Claim 16 is an independent claim and claims 17-19 and 21-23 depend there from.

This listing of claims will replace all prior versions and listings of claims in the application.

1. (Previously Presented) A method for classifying an audio signal, the method comprising:

receiving an audio signal to be classified;

dividing the audio signal at least into sub-bands compatible with speech and incompatible with speech;

calculating a ratio of the sub-bands;

comparing the ratio to a threshold value; and

classifying the audio signal based upon the comparison, wherein classifying the audio signal further comprises turning on a flag in a header of a packet of digital audio information, wherein the flag provides an indication of classification of the audio signal based upon comparison of the ratio and the threshold value.

2. (Original) The method according to claim 1, further comprising performing a Fourier Transform on the audio signal to transform the signal from time to frequency.

3. (Original) The method according to claim 2, further comprising squaring the amplitude of the transformed audio signal and associating energy with frequency.

4.   (Original) The method according to claim 1, wherein calculating a ratio of the sub-bands further comprises integrating the sub-band compatible with speech, integrating the sub-band incompatible with speech, and calculating a ratio of the sub-bands.

5.   (Original) The method according to claim 1, wherein classifying the audio signal based upon the comparison the ratio to the threshold value further comprises,

if the ratio is less than the threshold value, then the audio signal is classified as speech.

6.   (Original) The method according to claim 1, wherein classifying the audio signal based upon the comparison of the ratio to the threshold value further comprises,

if the ratio is greater than the threshold value, then the audio signal is classified as music.

7.   (Original) The method according to claim 1, wherein dividing the audio signal into sub-bands compatible with speech and incompatible with speech further comprises dividing the audio signal into a first frequency sub-band comprising frequencies below 4 KHz and a second frequency sub-band comprising frequencies above 4 KHz.

8.   (Original) The method according to claim 1, wherein upon classifying the signal as one of speech and music, a classifying sub-band may be further divided and additional ratios calculated to provide more detailed information regarding an identity of a sound producer of the audio signal.

9.   (Original) The method according to claim 1, wherein classifying the audio signal occurs prior to encoding the audio signal.

10.   (Original) The method according to claim 1, wherein classifying the audio signal occurs after decoding the audio signal.

11.   (Original) The method according to claim 1, further comprising:

converting the audio signal from an analog signal to a digital signal;

encoding the audio signal;

packetizing the audio signal;

transmitting the audio signal;

decoding the audio signal; and

processing the audio signal, wherein processing at least comprises one of storing the audio signal and playing the audio signal.

12.   (Original) The method according to claim 1, wherein the threshold value used in the comparison is pre-determined and pre-set by a user.

13.   (Original) The method according to claim 1, wherein the threshold value used in the comparison is determined through trial and error of a plurality of iterations in a comparing device.

14.   (Cancelled)

15.   (Original) The method according to claim 1, wherein the audio signal is one of an analog signal and a digital signal.

16.   (Previously Presented) A system for classifying an audio signal, the system comprising:

an input for receiving an audio signal;

a mathematical processor for performing a plurality of mathematical functions on the audio signal;

a comparator for comparing a calculated ratio of sub-bands of energy of the audio signal to a threshold value; and

an output indicating a classification of the audio signal, wherein indicating classification comprises turning on a flag in a header in a packet of digital information, wherein the flag may be used to determine whether the audio signal is mathematically processed further or directed to a receiver.

17.   (Original) The system according to claim 16, wherein the plurality of mathematical functions performed on the audio signal may comprise at least one of a Fourier Transform, squaring an amplitude, separating an audio spectrum into sub-bands, integrating the sub-bands, and calculating a ratio of integrated sub-bands.

18.   (Original) The system according to claim 16, wherein the comparator may be programmed with the threshold value by a user.

19.   (Original) The system according to claim 16, wherein the comparator may determine the threshold value through a plurality of comparative iterations.

20.   (Cancelled)

21.   (Original) The system according to claim 16, wherein the comparator is adapted to classify the audio signal based upon the comparison the ratio to the threshold value wherein, if the ratio is less than the threshold value, then the audio signal is classified as speech.

22.   (Original) The system according to claim 16, wherein the comparator is adapted to classify the audio signal based upon the comparison of the ratio to the threshold value wherein, if the ratio is greater than the threshold value, then the audio signal is classified as music.

23.   (Original) The system according to claim 16, wherein upon classifying the signal as one of speech and music, a dominant classifying sub-band may be further divided to provide more detailed information regarding an identity of a producer of the audio signal.